


[Subscribe \(Full Service\)](#) [Register \(Limited Service, Free\)](#) [Login](#)

 Search: [The ACM Digital Library](#) [The Guide](#)


THE ACM DIGITAL LIBRARY

Feedback

 routing "flow cache"
 Terms used: [routing flow cache](#)

Found

Sort results by relevance

Save results to a Binder

Refine these results with Adv

Display results expanded form

☐ Open results in a new window

Try this search in The ACM Gi

Results 1 - 14 of 14

1 Router plugins: a software architecture for next-generation routers

Ads by

 Dan Decasper, Zubin Dittia, Guru Parulkar, Bernhard Plattner
 February 2000 | IEEE/ ACM Transactions on Networking (TON). Volume 8 Issue 1
 Publisher: IEEE Press

Full text available: pdf(530.34 KB) Additional Information: full citation, references, cited by, index terms

Bibliometrics: Downloads (6 Weeks): 24, Downloads (12 Months): 104, Citation Count: 7

Keywords: communication system routing, communication system security, internet, modular computer systems

 Softy
 Train
 Onlin
 in So
 Find
 www.v

2 Trajectory sampling for direct traffic observation

Func

 N. G. Duffield, Matthias Grossglauser
 June 2001 | IEEE/ ACM Transactions on Networking (TON). Volume 9 Issue 3
 Publisher: IEEE Press

Full text available: pdf(251.55 KB) Additional Information: full citation, abstract, references, cited by, index terms

Bibliometrics: Downloads (6 Weeks): 14, Downloads (12 Months): 58, Citation Count: 16

Traffic measurement is a critical component for the control and engineering of communication networks. We argue that traffic measurement should make it possible to obtain the spatial flow of traffic through the domain, i.e., the paths followed by packets ...

Keywords: Hash functions, Internet traffic measurement, packet sampling, traffic engineering

 Func
 Try T
 Autor
 risk fr
 www.g

 Softy
 Softw
 applic
 US &
 Level
 www.11

3 Adaptive resource management for flow-based IP/ATM hybrid switching systems

 Hao Che, San-qi Li, Arthur Lin
 October 1998 | IEEE/ ACM Transactions on Networking (TON). Volume 6 Issue 5
 Publisher: IEEE Press

Full text available: pdf(570.65 KB) Additional Information: full citation, references, index terms

Bibliometrics: Downloads (6 Weeks): 4, Downloads (12 Months): 21, Citation Count: 0

Keywords: adaptive resource management, cut-through switching, flow cache

 Dev I
 The #
 defec
 mane
 auto
 www.3


management, flow classification, flow-based IP/ATM hybrid switching

4 [Predicting resource usage and estimation accuracy in an IP flow measurement collection infrastructure](#)

Nick Duffield, Carsten Lund

October 2003 | MC '03: Proceedings of the 3rd ACM SIGCOMM conference on Internet measurement

Publisher: ACM

Full text available:  [pdf\(362.83 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [cited by](#), [index terms](#)

Bibliometrics: Downloads (6 Weeks): 5, Downloads (12 Months): 33, Citation Count: 8

This paper describes a measurement infrastructure used to collect detailed IP traffic measurements from an IP backbone. Usage, i.e., bytes transmitted, is determined from raw NetFlow records generated by the backbone routers. The amount of raw data is ...

Keywords: bandwidth, estimation, sampling, variance

5 [Algorithms and estimators for accurate summarization of internet traffic](#)

Edith Cohen, Nick Duffield, Haim Kaplan, Carsten Lund, Mikkel Thorup

October 2007 | MC '07: Proceedings of the 7th ACM SIGCOMM conference on Internet measurement

Publisher: ACM

Full text available:  [pdf\(365.01 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

Bibliometrics: Downloads (6 Weeks): 15, Downloads (12 Months): 73, Citation Count: 0

Statistical summaries of traffic in IP networks are at the heart of network operation and are used to recover information on the traffic of arbitrary subpopulations of flows. It is therefore of great importance to collect the most accurate and informative ...

Keywords: data streams, ip flows, netflow, network management, sketches, subpopulation queries

6 [Sketching unaggregated data streams for subpopulation-size queries](#)

Edith Cohen, Nick Duffield, Haim Kaplan, Carsten Lund, Mikkel Thorup

June 2007 | PODS '07: Proceedings of the twenty-sixth ACM SIGMOD-SIGACT-SIGART symposium on Principles of database systems

Publisher: ACM

Full text available:  [pdf\(311.89 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

Bibliometrics: Downloads (6 Weeks): 7, Downloads (12 Months): 124, Citation Count: 1

IP packet streams consist of multiple interleaving IP flows. Statistical summaries of these streams, collected for different measurement periods, are used for characterization of traffic, billing, anomaly detection, inferring traffic demands, configuring ...

Keywords: IP flows, data streams, sketches, subpopulation size


7 [Flow sampling under hard resource constraints](#)

Nick Duffield, Carsten Lund, Mikkel Thorup

June 2004 | SIGMETRI CS '04/ Performance '04: Proceedings of the joint international

conference on Measurement and modeling of computer systems

Publisher: ACM

Full text available:  pdf(246.84 KB) Additional Information: full citation, abstract, references, cited by, index terms

Bibliometrics: Downloads (6 Weeks): 11, Downloads (12 Months): 70, Citation Count: 8

Many network management applications use as their data traffic volumes differentiated by attributes such as IP address or port number. IP flow records are commonly collected for this purpose: these enable determination of fine-grained usage of network ...

Keywords: IP flows, sampling, variance reduction


8 Bitmap algorithms for counting active flows on high speed links



Cristian Estan, George Varghese, Mike Fisk

October 2003 IMC '03: Proceedings of the 3rd ACM SIGCOMM conference on Internet measurement

Publisher: ACM

Full text available:  pdf(330.81 KB) Additional Information: full citation, abstract, references, cited by, index terms

Bibliometrics: Downloads (6 Weeks): 14, Downloads (12 Months): 79, Citation Count: 18

This paper presents a family of bitmap algorithms that address the problem of counting the number of distinct header patterns (flows) seen on a high speed link. Such counting can be used to detect DoS attacks and port scans, and to solve measurement ...

Keywords: counting flows, network traffic measurement


9 Flow sampling under hard resource constraints



Nick Duffield, Carsten Lund, Mikkel Thorup

June 2004 ACM SIGMETRICS Performance Evaluation Review, Volume 32 Issue 1

Publisher: ACM

Full text available:  pdf(246.84 KB) Additional Information: full citation, abstract, references, cited by, index terms

Bibliometrics: Downloads (6 Weeks): 11, Downloads (12 Months): 70, Citation Count: 8

Many network management applications use as their data traffic volumes differentiated by attributes such as IP address or port number. IP flow records are commonly collected for this purpose: these enable determination of fine-grained usage of network ...

Keywords: IP flows, sampling, variance reduction

10 Wire speed packet classification without teams: a few more registers (and a bit of logic) are enough



Qunfeng Dong, Suman Banerjee, Jia Wang, Dheeraj Agrawal

June 2007 SIGMETRICS '07: Proceedings of the 2007 ACM SIGMETRICS international conference on Measurement and modeling of computer systems

Publisher: ACM

Full text available:  pdf(289.06 KB) Additional Information: full citation, abstract, references, index terms

Bibliometrics: Downloads (6 Weeks): 25, Downloads (12 Months): 229, Citation Count: 0

Packet classification is the foundation of many Internet functions such as QoS and

security. A long thread of research has proposed efficient software-based solutions to this problem. Such software solutions are attractive because they require cheap ...


Keywords: packet classification, rule cache, rule evolution

11 Estimating flow distributions from sampled flow statistics

Nick Duffield, Carsten Lund, Mikkel Thorup

August 2003 SIGCOMM '03: Proceedings of the 2003 conference on Applications, technologies, architectures, and protocols for computer communications

Publisher: ACM

Full text available:  pdf(333.29 KB) Additional Information: full citation, abstract, references, cited by, index terms

Bibliometrics: Downloads (6 Weeks): 9, Downloads (12 Months): 91, Citation Count: 22

Passive traffic measurement increasingly employs sampling at the packet level. Many high-end routers form flow statistics from a sampled substream of packets. Sampling is necessary in order to control the consumption of resources by the measurement operations. ...

Keywords: IP flows, maximum likelihood estimation, packet sampling

12 Wire speed packet classification without tcams: a few more registers (and a bit of logic) are enough

Qunfeng Dong, Suman Banerjee, Jia Wang, Dheeraj Agrawal

June 2007 ACM SIGMETRICS Performance Evaluation Review, Volume 35 Issue 1

Publisher: ACM

Full text available:  pdf(269.06 KB) Additional Information: full citation, abstract, references, index terms

Bibliometrics: Downloads (6 Weeks): 25, Downloads (12 Months): 229, Citation Count: 0

Packet classification is the foundation of many Internet functions such as QoS and security. A long thread of research has proposed efficient software-based solutions to this problem. Such software solutions are attractive because they require cheap ...

Keywords: packet classification, rule cache, rule evolution

13 Bitmap algorithms for counting active flows on high-speed links

Cristian Estan, George Varghese, Michael Fisk

October 2006 IEEE/ACM Transactions on Networking (TON), Volume 14 Issue 5

Publisher: IEEE Press

Full text available:  pdf(952.17 KB) Additional Information: full citation, abstract, references, index terms

Bibliometrics: Downloads (6 Weeks): 12, Downloads (12 Months): 89, Citation Count: 0

This paper presents a family of bitmap algorithms that address the problem of counting the number of distinct header patterns (flows) seen on a high-speed link. Such counting can be used to detect DoS attacks and port scans and to solve measurement problems. ...

Keywords: counting distinct elements, traffic measurements

14 Lightweight application classification for network management

Hongbo Jiang, Andrew W. Moore, Zihui Ge, Shudong Jin, Jia Wang



August 2007 INM '07: Proceedings of the 2007 SIGCOMM workshop on Internet network management

Publisher: ACM

Full text available: pdf(120.19 KB) Additional Information: full citation, abstract, references, index terms

Bibliometrics: Downloads (6 Weeks): 16, Downloads (12 Months): 77, Citation Count: 0

Traffic application classification is an essential step in the network management process to provide high availability of network services. However, network management has seen limited use of traffic classification because of the significant overheads ...

Keywords: flow classification, internet traffic, traffic identification

Results 1 - 14 of 14

The ACM Portal is published by the Association for Computing Machinery. Copyright © 2008 ACM, Inc.

[Terms of Usage](#) [Privacy Policy](#) [Code of Ethics](#) [Contact Us](#)

Useful downloads: Adobe Acrobat QuickTime Windows Media Player Real Player